

COVID-19: Economic Implications and Policy Response

Scott L. Baier
Clemson University
and
National Economic Education Delegation



1

1

JOHNS HOPKINS UNIVERSITY OF MEDICINE
CORONAVIRUS RESOURCE CENTER
Home Maps & Trends Testing Tracing News & Information COVID-19 Basics Videos & Live Events

World Map
U.S. Map
Critical Trends

COVID-19 Dashboard by the Center for Systems Science and Engineering (CSSE) at Johns Hopkins University (JHU)

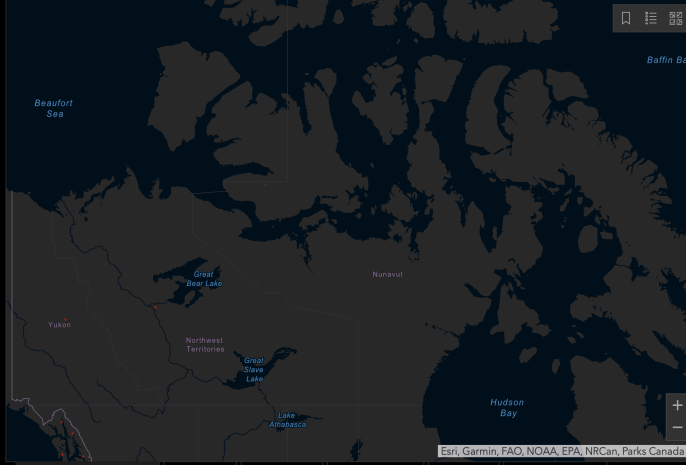
Total Confirmed
10,644,064

Confirmed Cases by Country/Region/Sovereignty

- 2,678,202 US
- 1,448,753 Brazil
- 653,479 Russia
- 585,481 India
- 314,992 United Kingdom
- 288,477 Peru
- 282,043 Chile
- 249,659 Spain
- 240,760 Italy
- 230,211 Iran
- 226,089 Mexico
- 213,470 Pakistan
- 202,981 France
- 201,008 Turkey

Admin0 Admin1 Admin2

Last Updated at (M/D/YYYY)
7/1/2020, 6:34:00 PM



Esri, Garmin, FAO, NOAA, EPA, NRC, Parks Canada

Global Deaths
514,527

- 127,970 deaths US
- 60,632 deaths Brazil
- 43,991 deaths United Kingdom
- 34,788 deaths Italy
- 29,864 deaths France
- 28,364 deaths Spain
- 27,769 deaths

Global Deaths

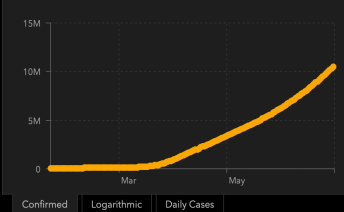
US State Level Deaths, Recovered

- 32,042 deaths, **70,590 recovered** New York US
- 15,078 deaths, **30,300 recovered** New Jersey US
- 8,053 deaths, **recovered** Massachusetts US
- 6,951 deaths, **recovered** Illinois US
- 6,684 deaths, **68,048 recovered** Pennsylvania US

US Deaths, Recovered

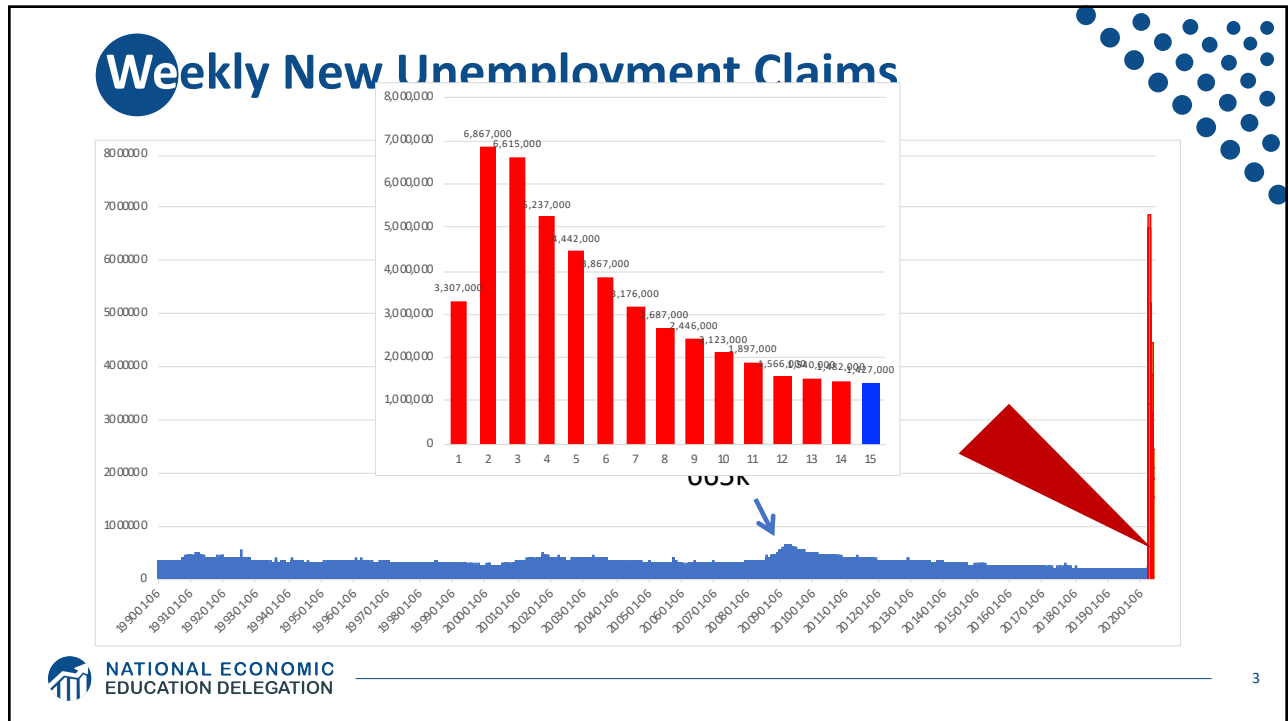
188 countries/regions

Lancet Inf Dis Article: [Here](#), Mobile Version: [Here](#).
Lead by JHU CSSE. Technical Support: [Esri Living Atlas](#) team and JHU APL. Financial Support: JHU and NSF. Click [here](#) to donate to the CSSE dashboard team, and other JHU COVID-19 Research Efforts. [FAQ](#). Read more in this [blog](#). [Contact US](#).

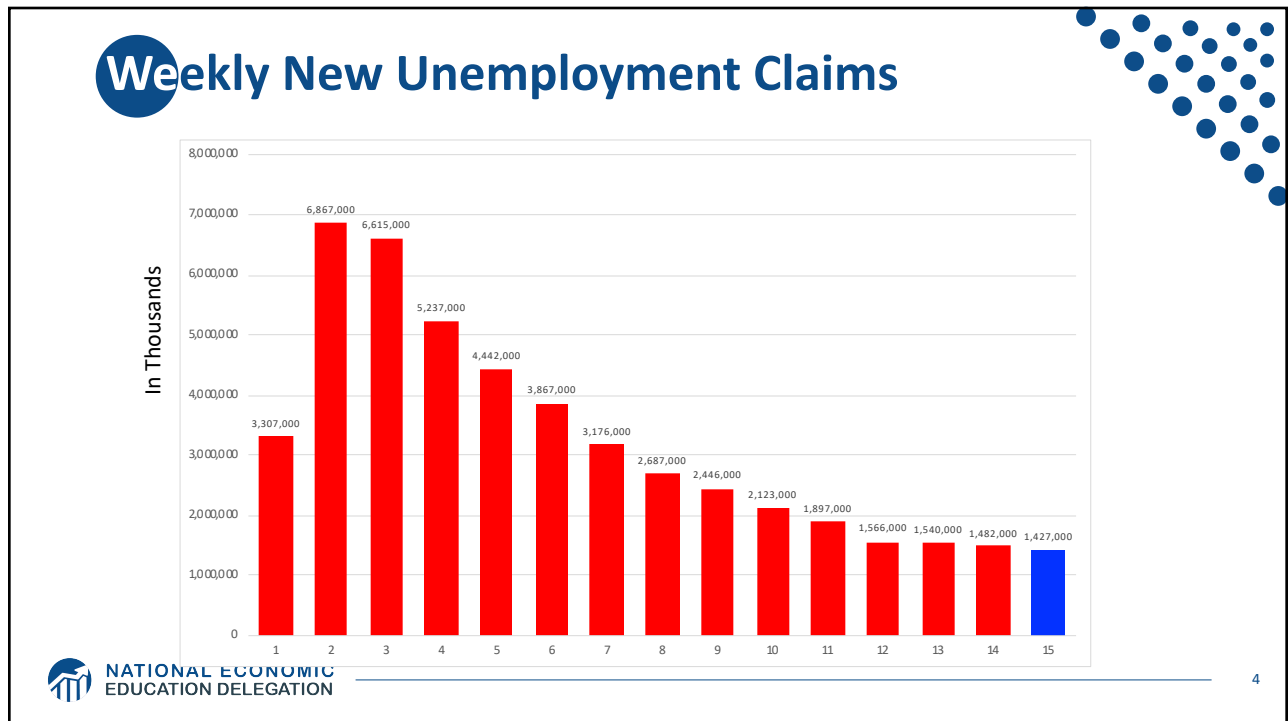


Confirmed Logarithmic Daily Cases

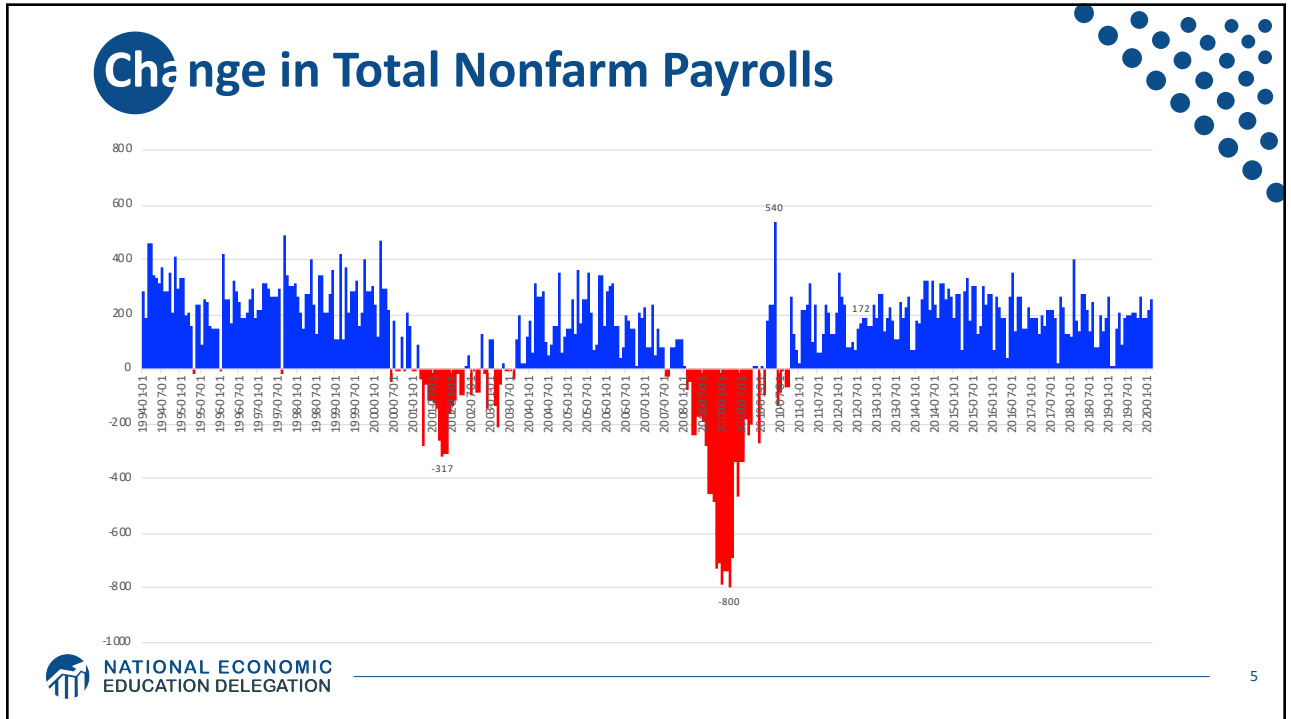
2



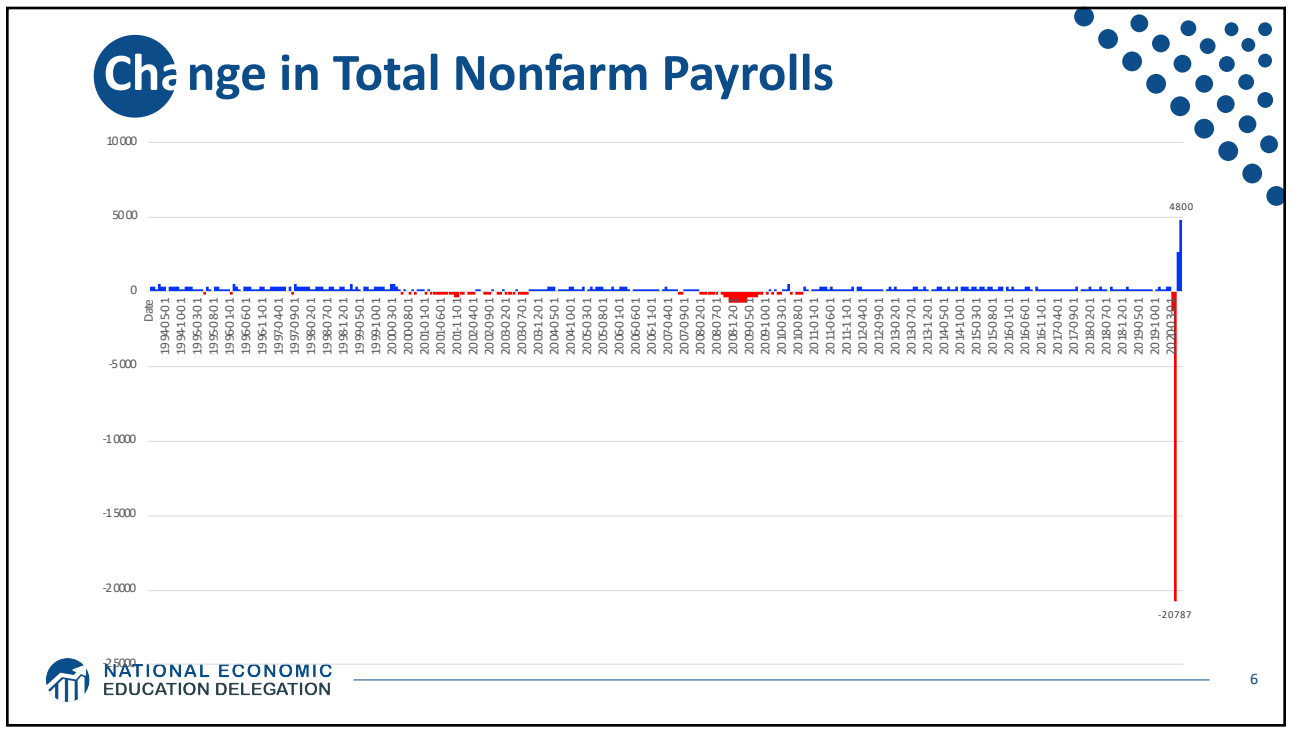
3



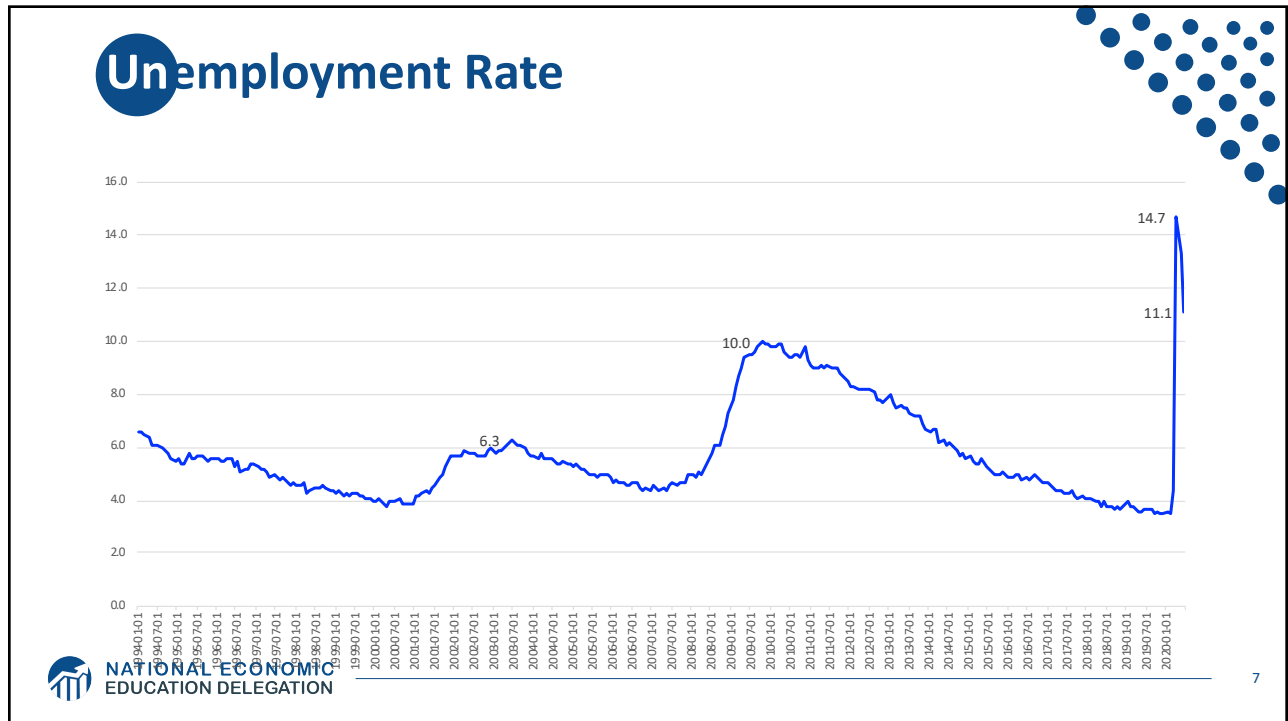
4



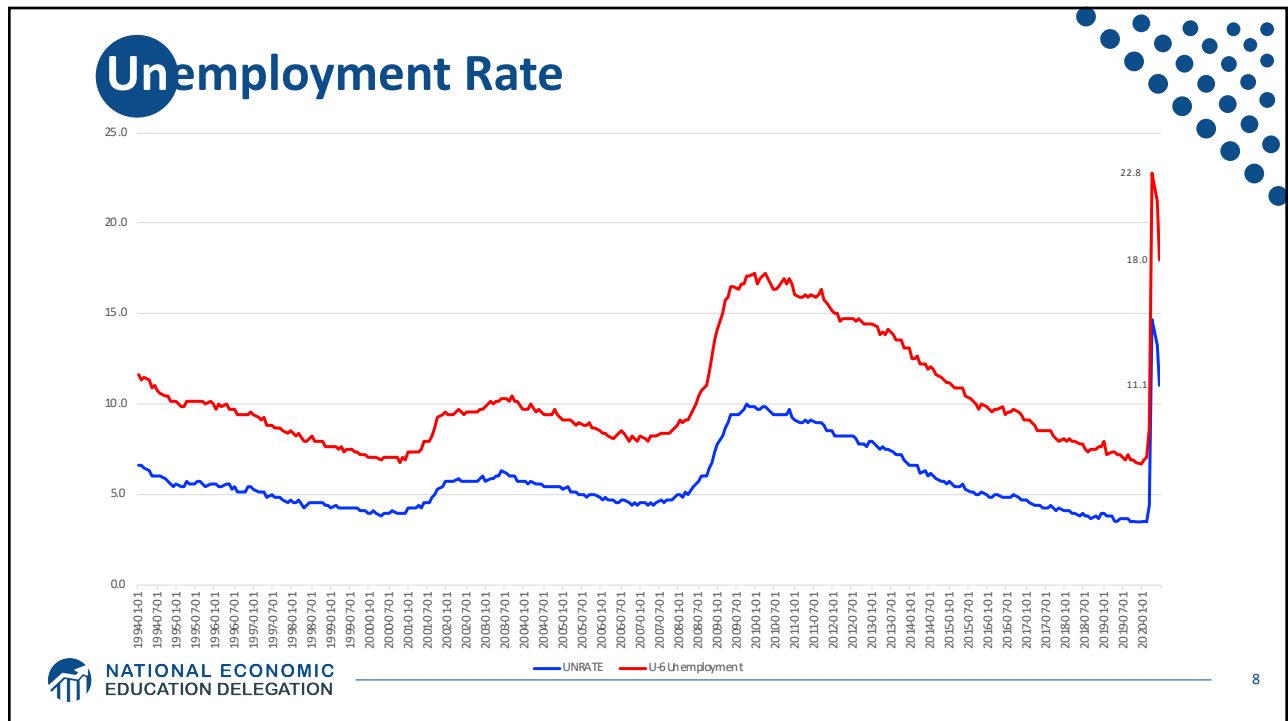
5



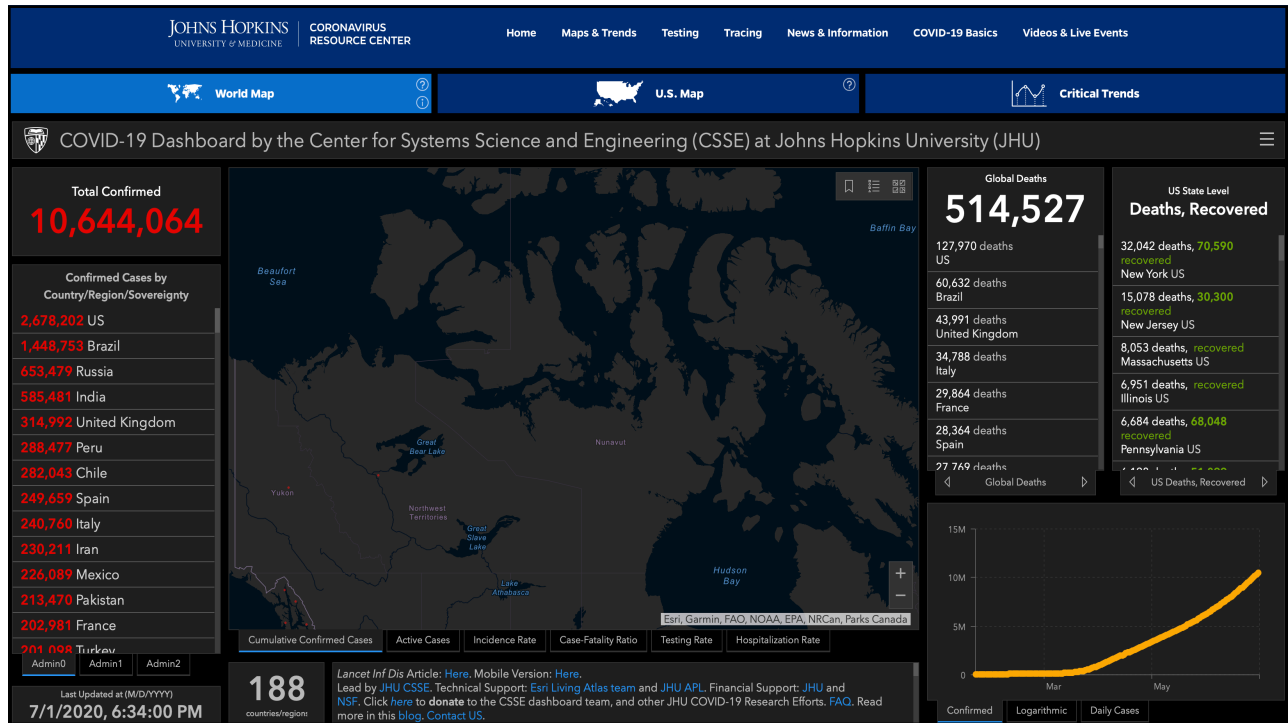
6



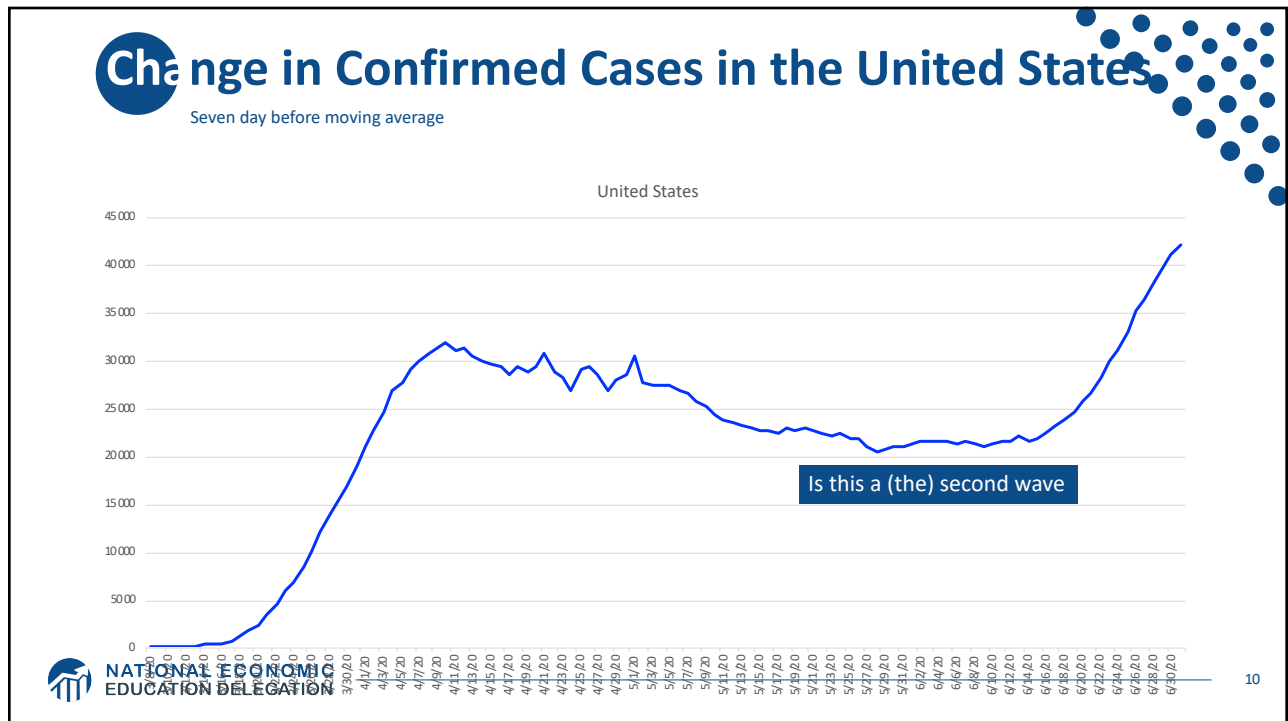
7



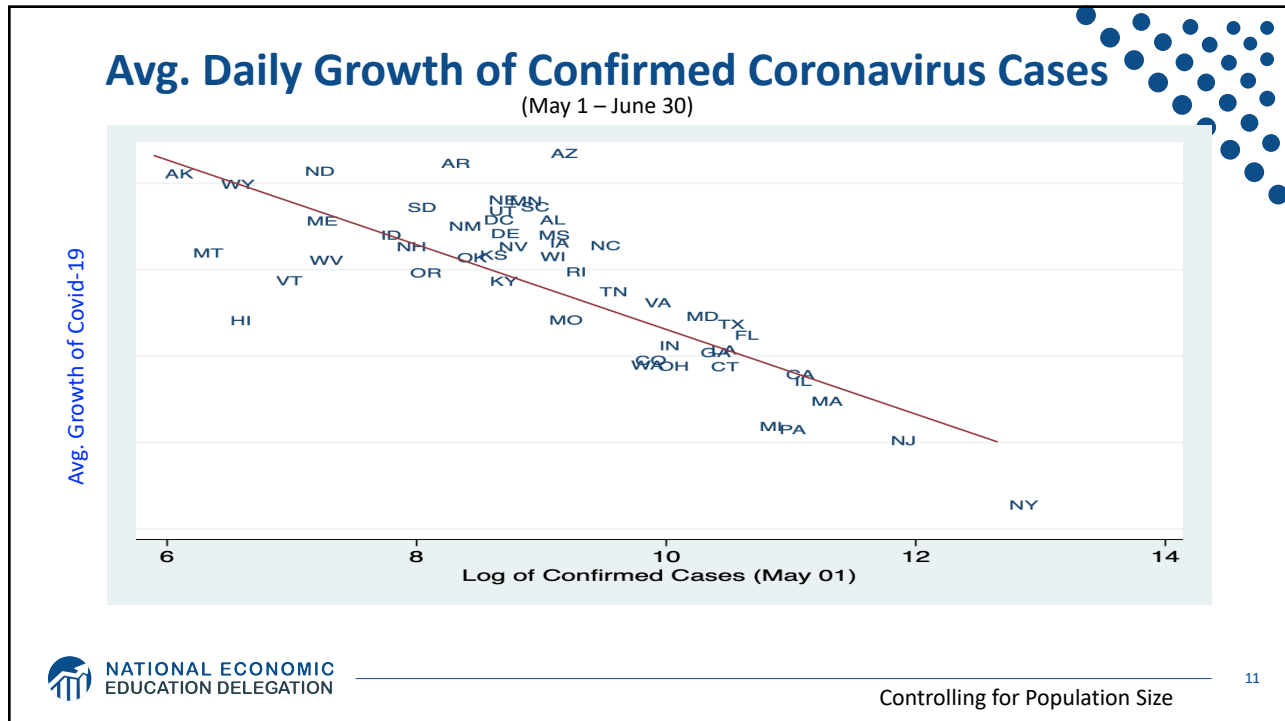
8



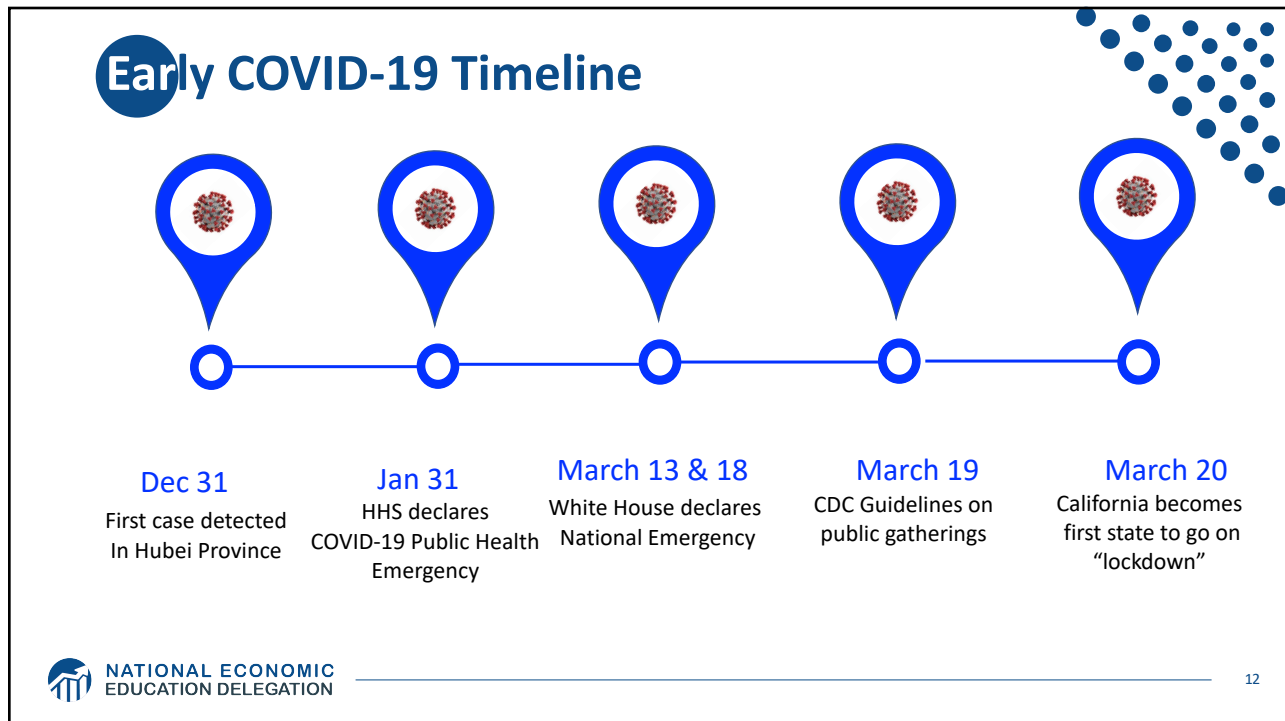
9



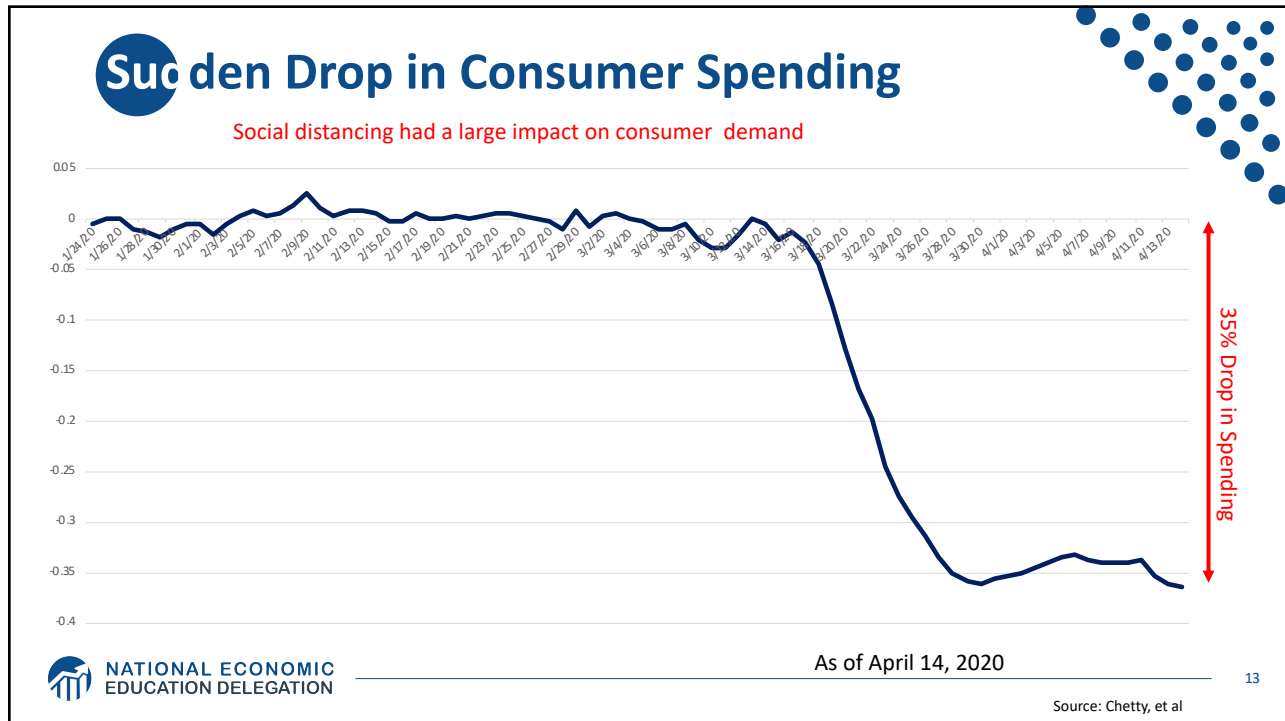
10



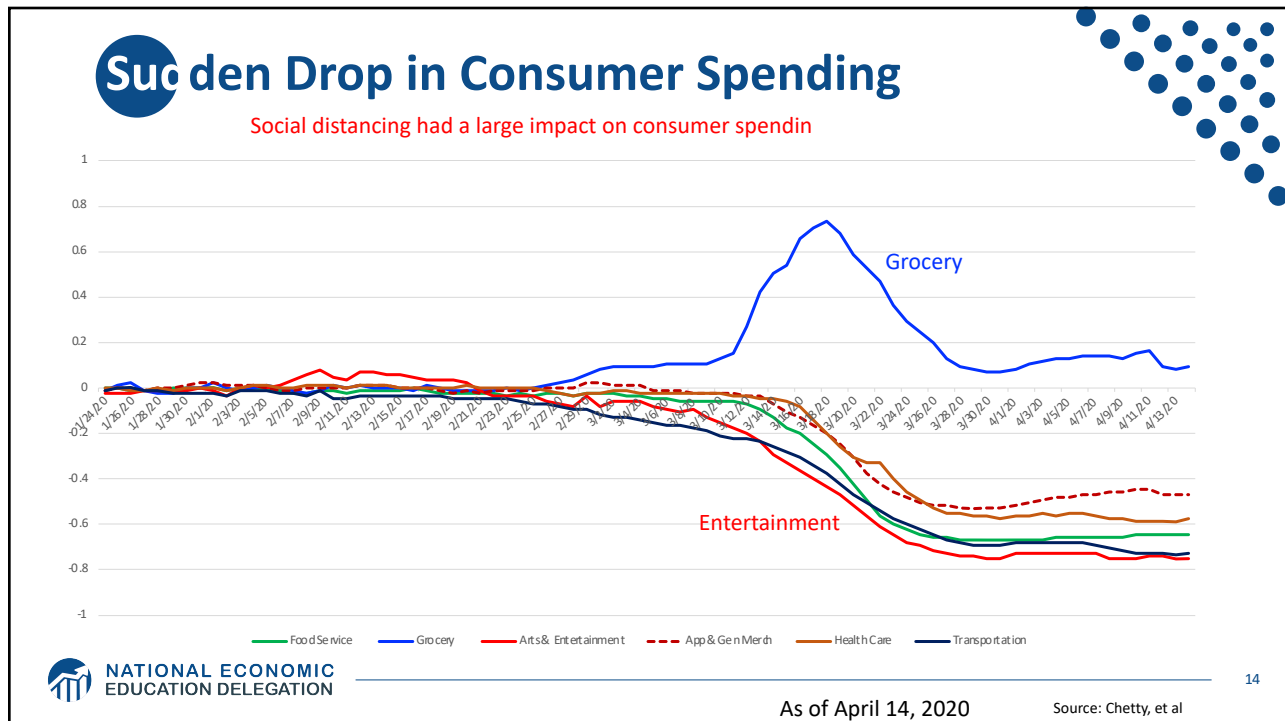
11



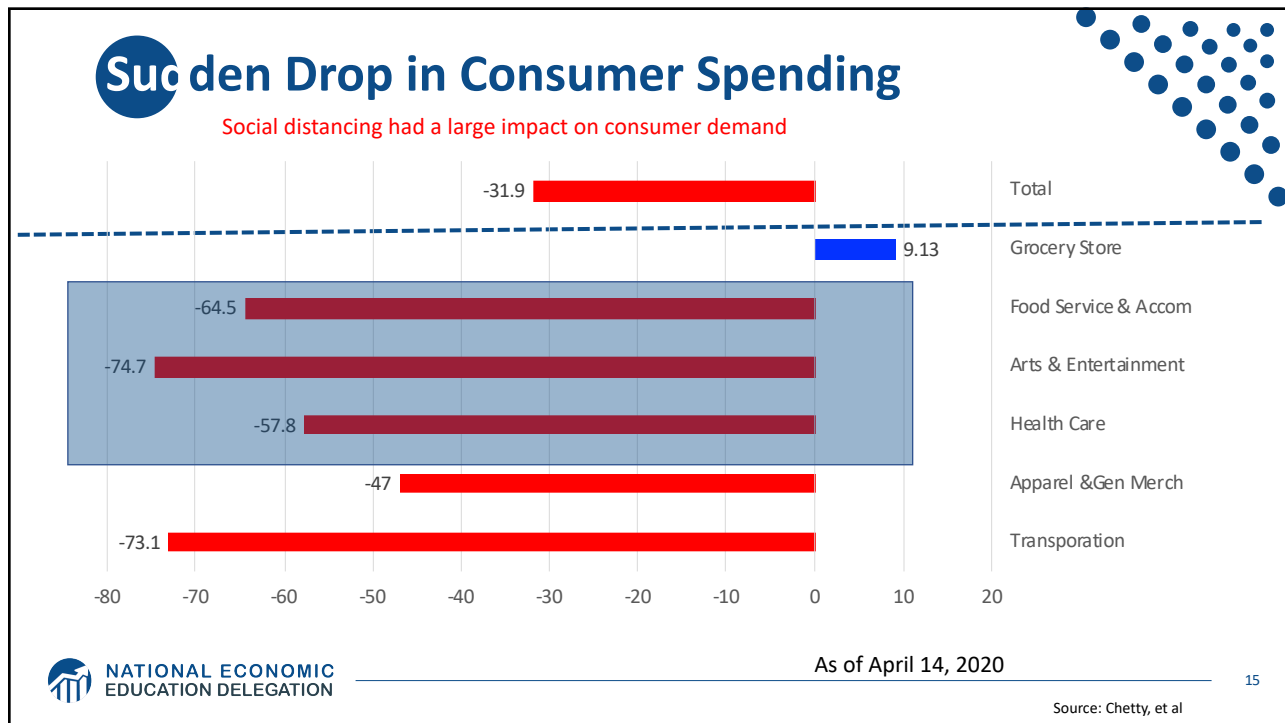
12



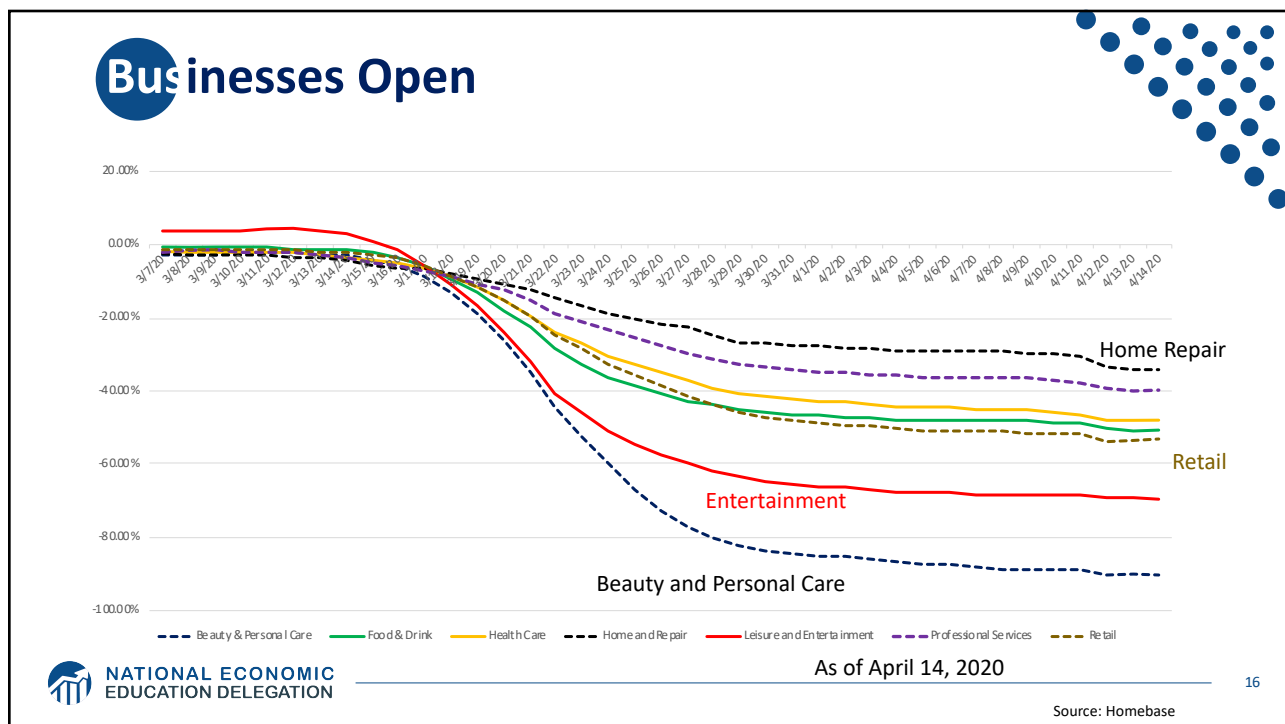
13



14



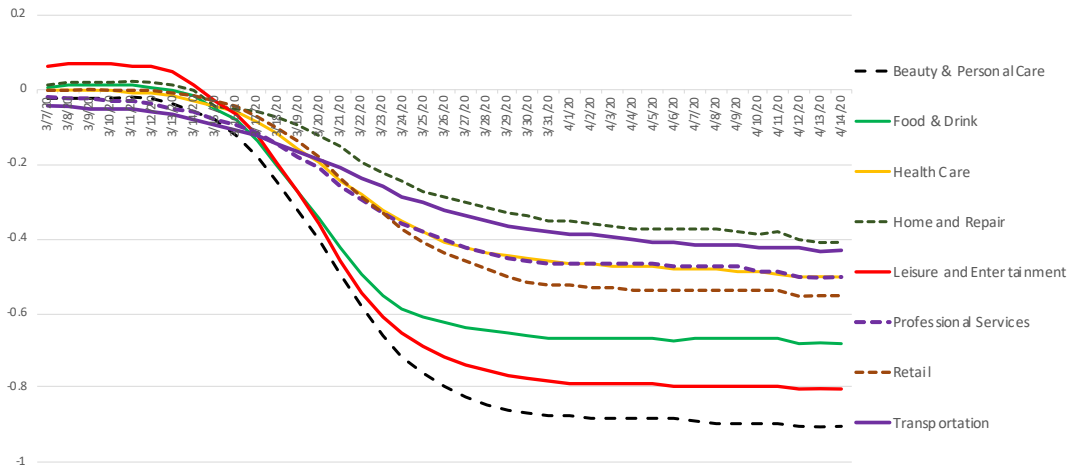
15



16

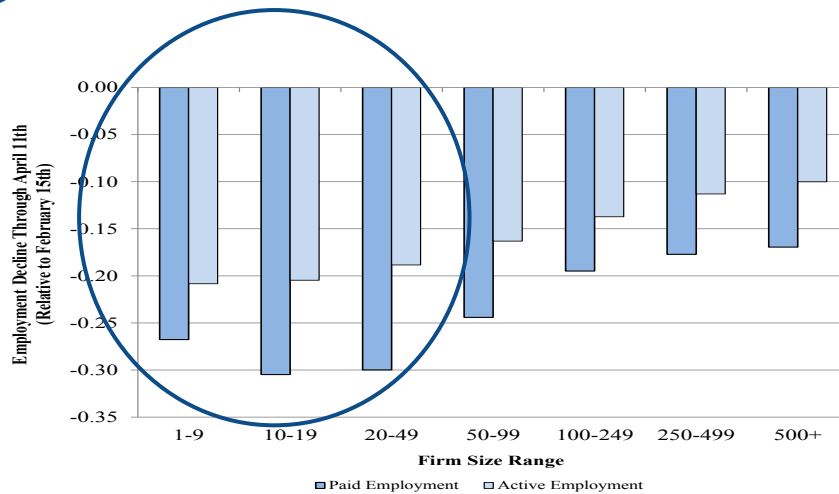
Sudden Drop in Hours Worked

Social distancing had a large impact on the demand for consumption of services

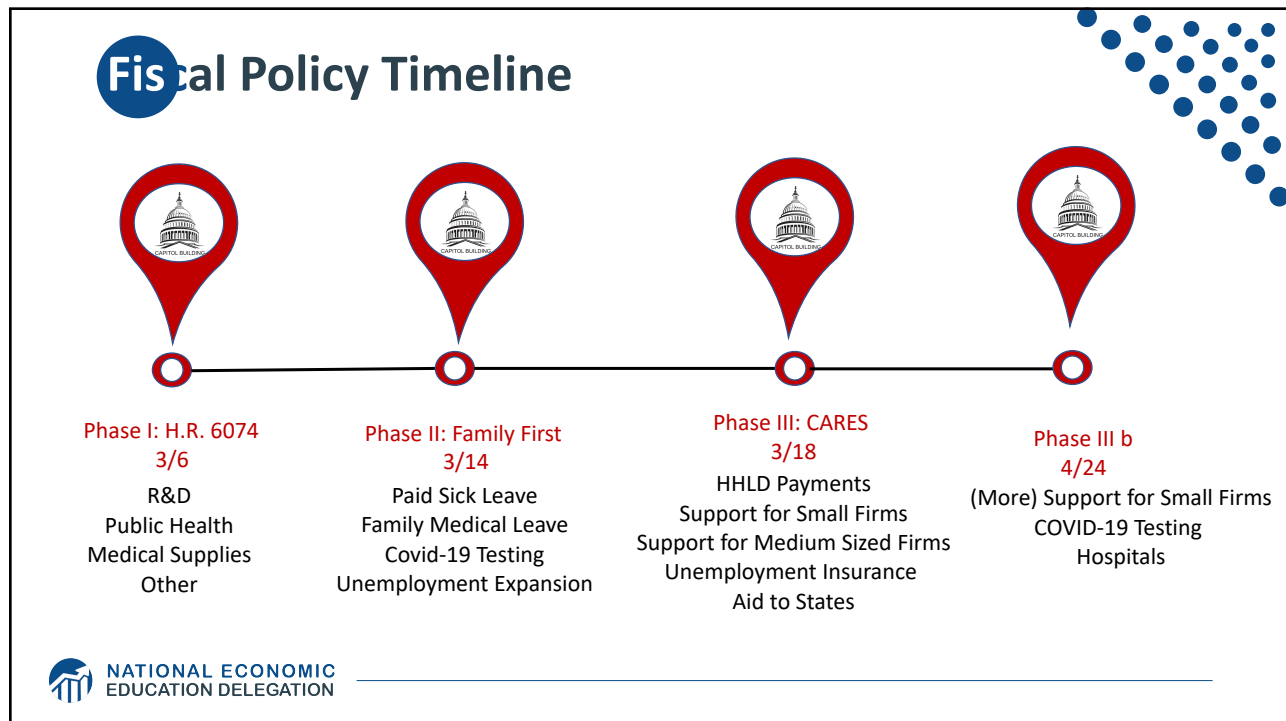


17

Employment Changes by Firm Size




18



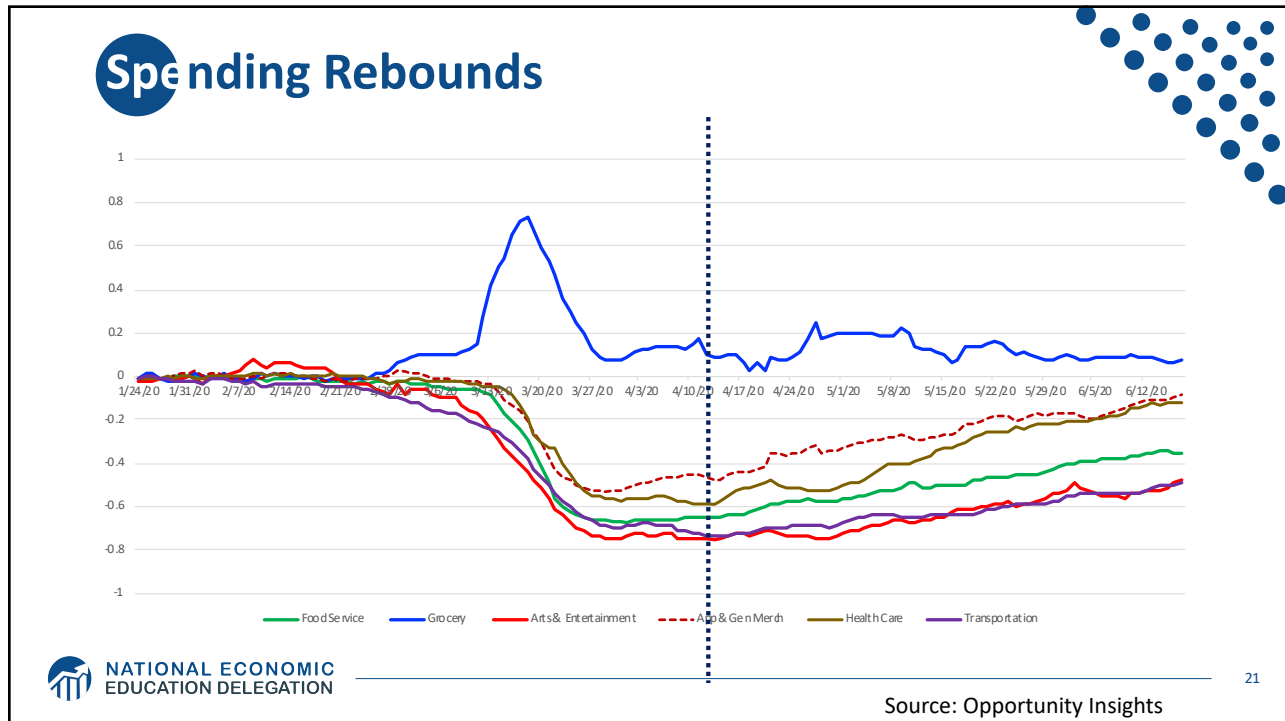
19

Fiscal Response: CARES Act (H.R. 748)

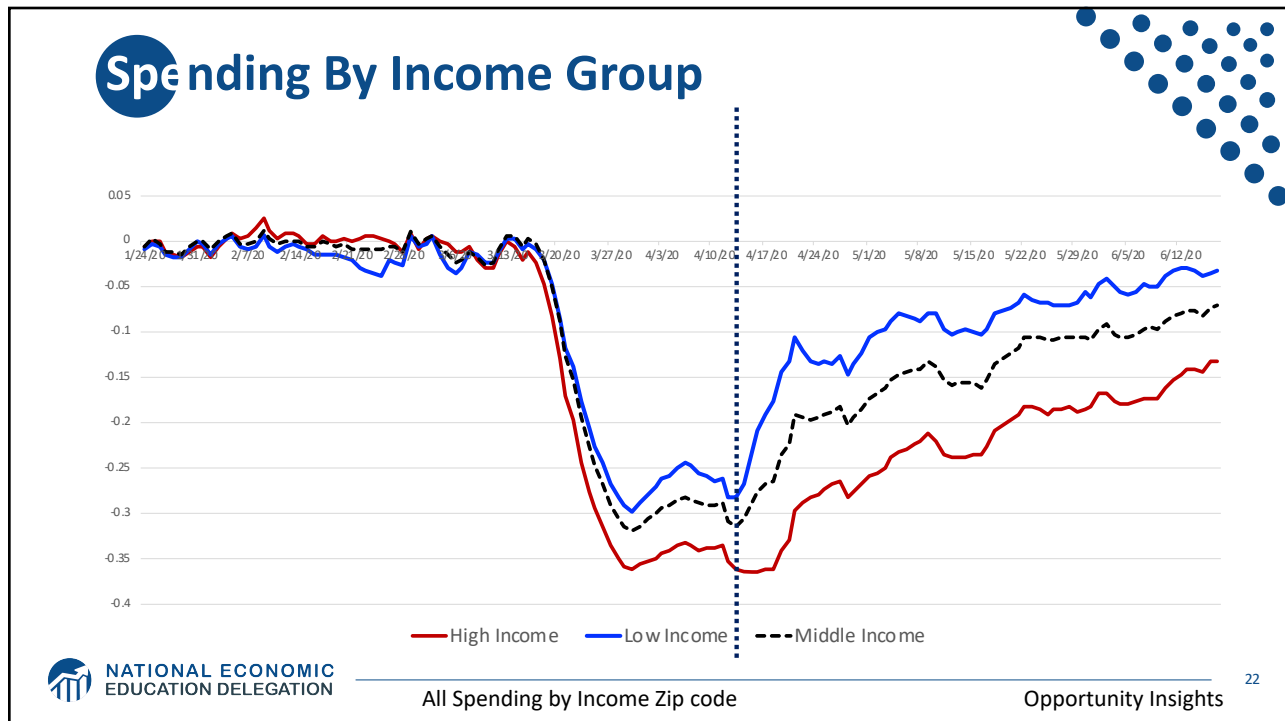
- **Direct payment to households \$1,200 for every adult and \$500 for every child – similar to the 2008 rebate but purpose is different.**
- **Small business loans (Paycheck Protection Program)-- \$350 billion**
 - <500 employees and designed to cover six (6) weeks of payroll.
- **Economic Stabilization Fund (Main Street Lending Program) – \$500bn**
 - for medium sized firms,
 - state and local municipalities, and
 - passenger and cargo air carriers, and firms maintaining national security.
- **Expand unemployment benefits**

 NATIONAL ECONOMIC EDUCATION DELEGATION 20

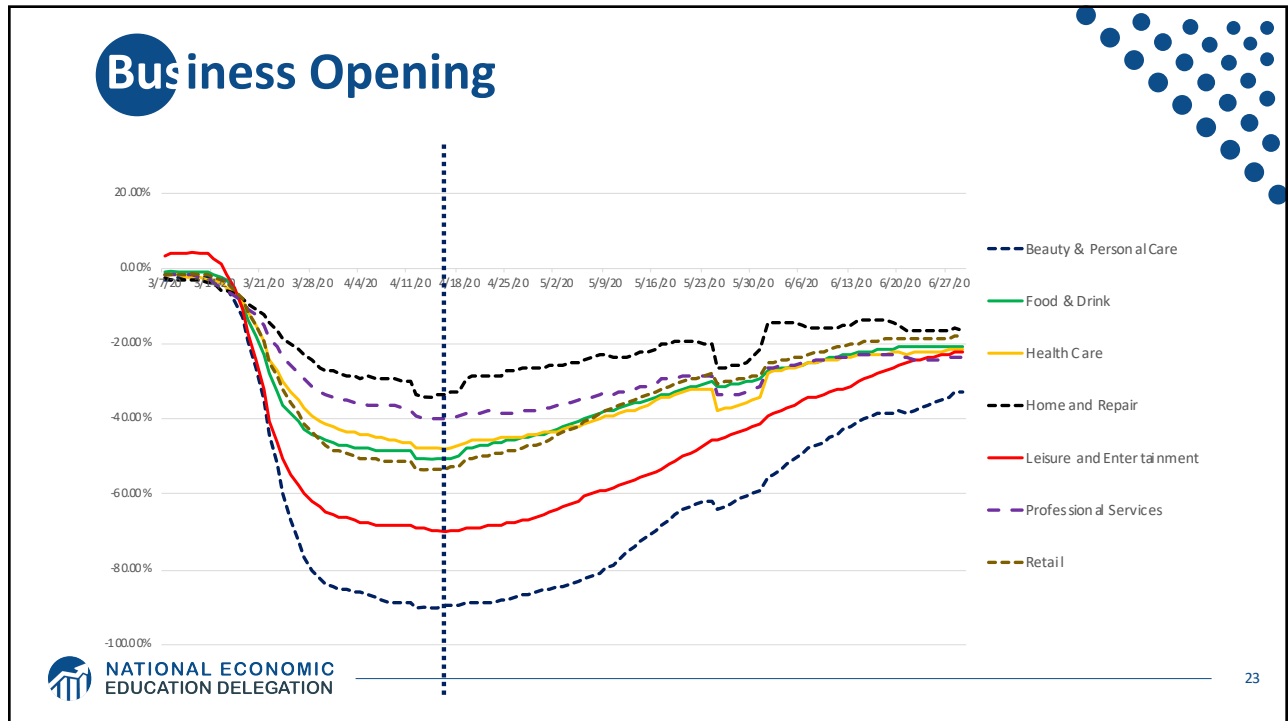
20



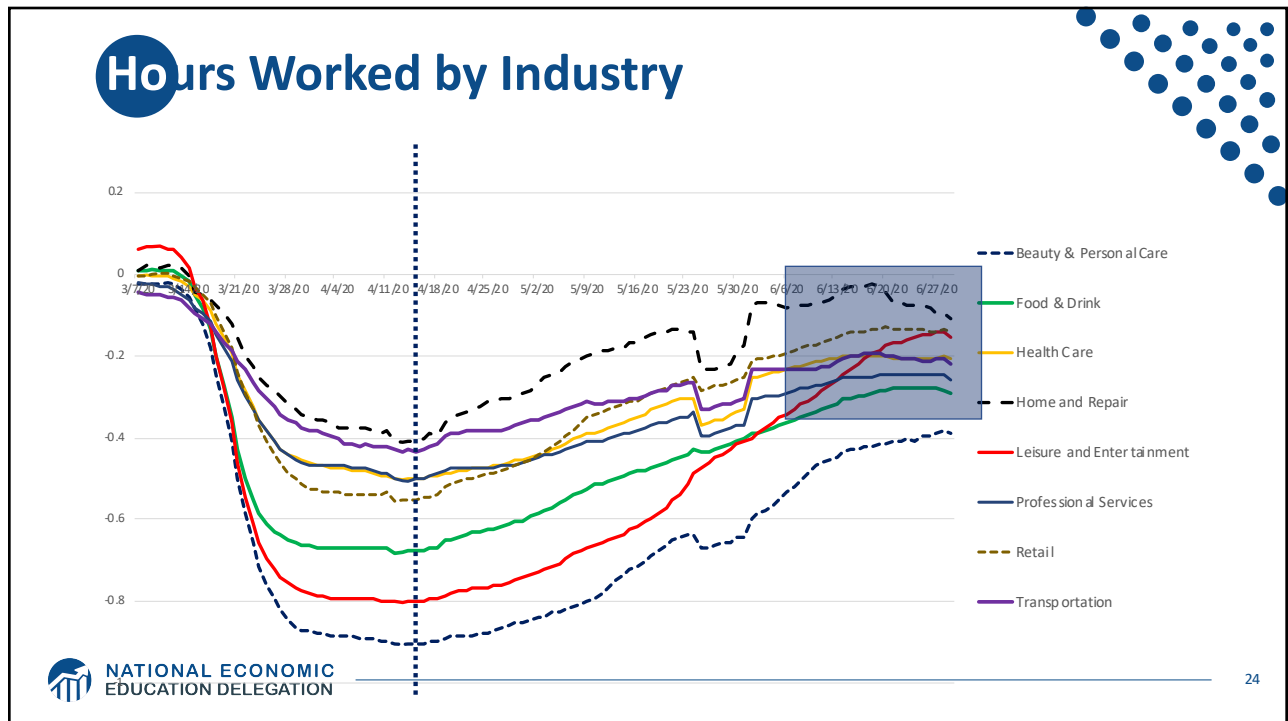
21



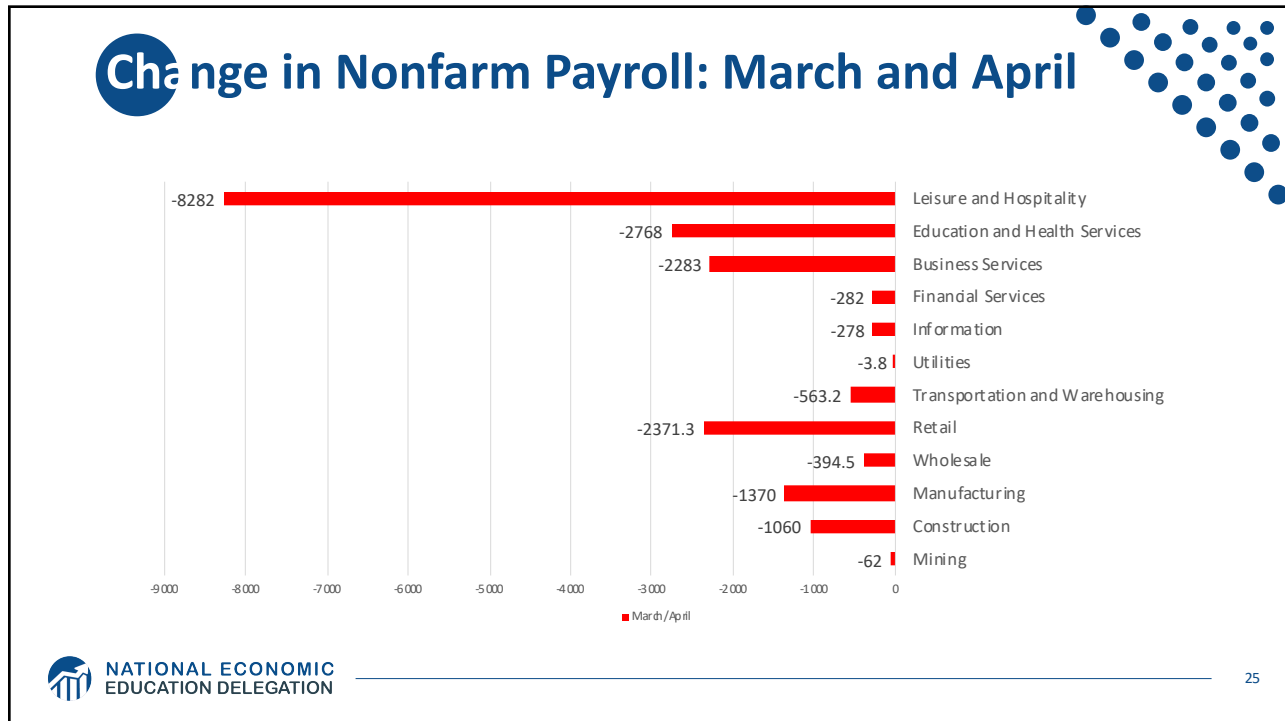
22



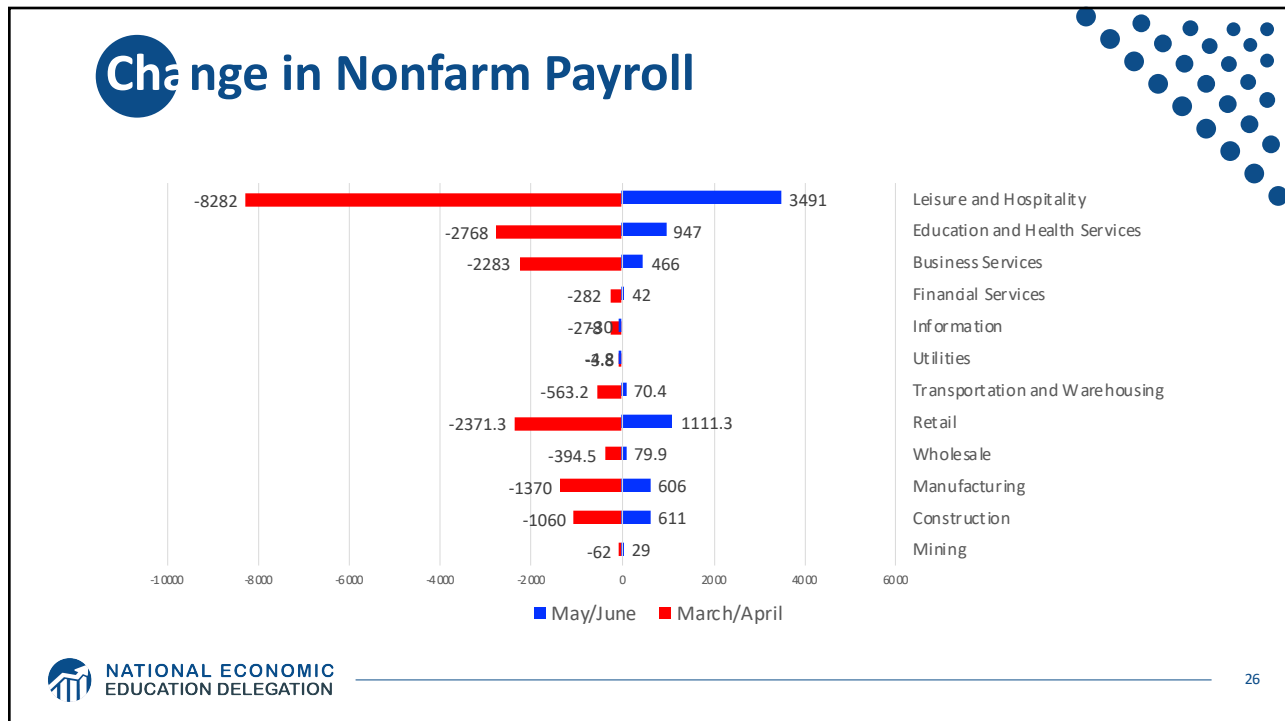
23



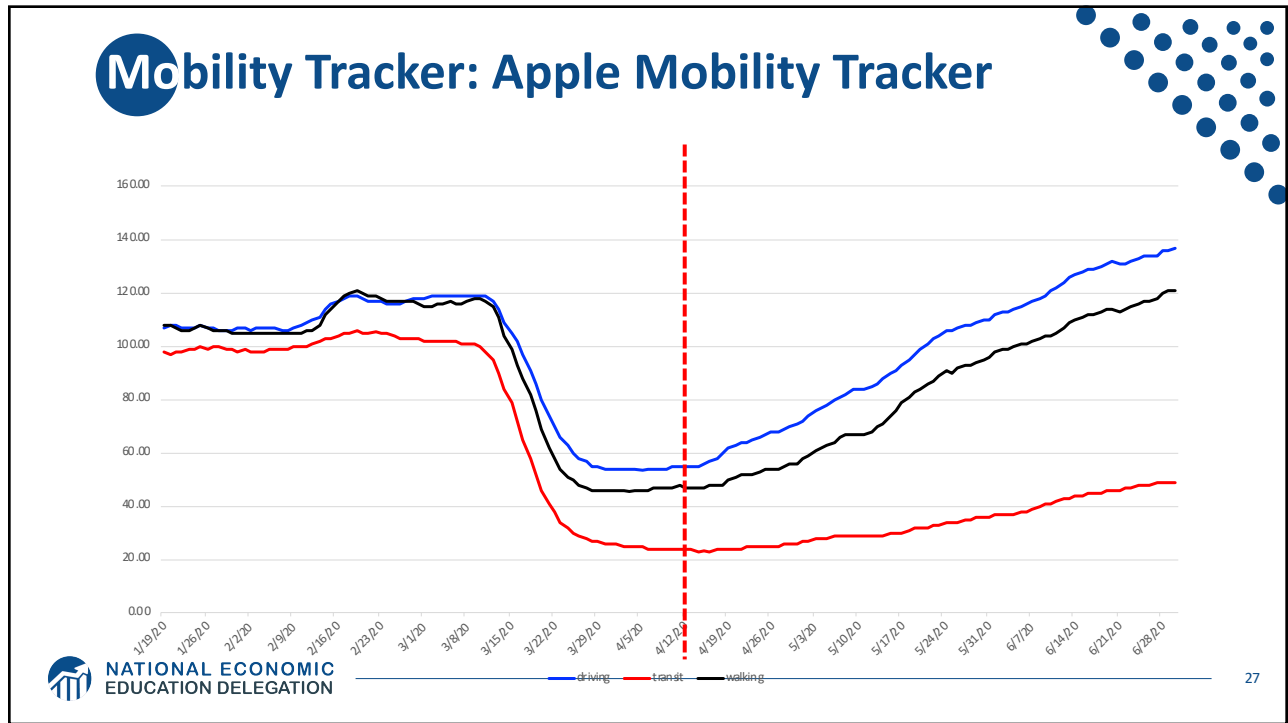
24



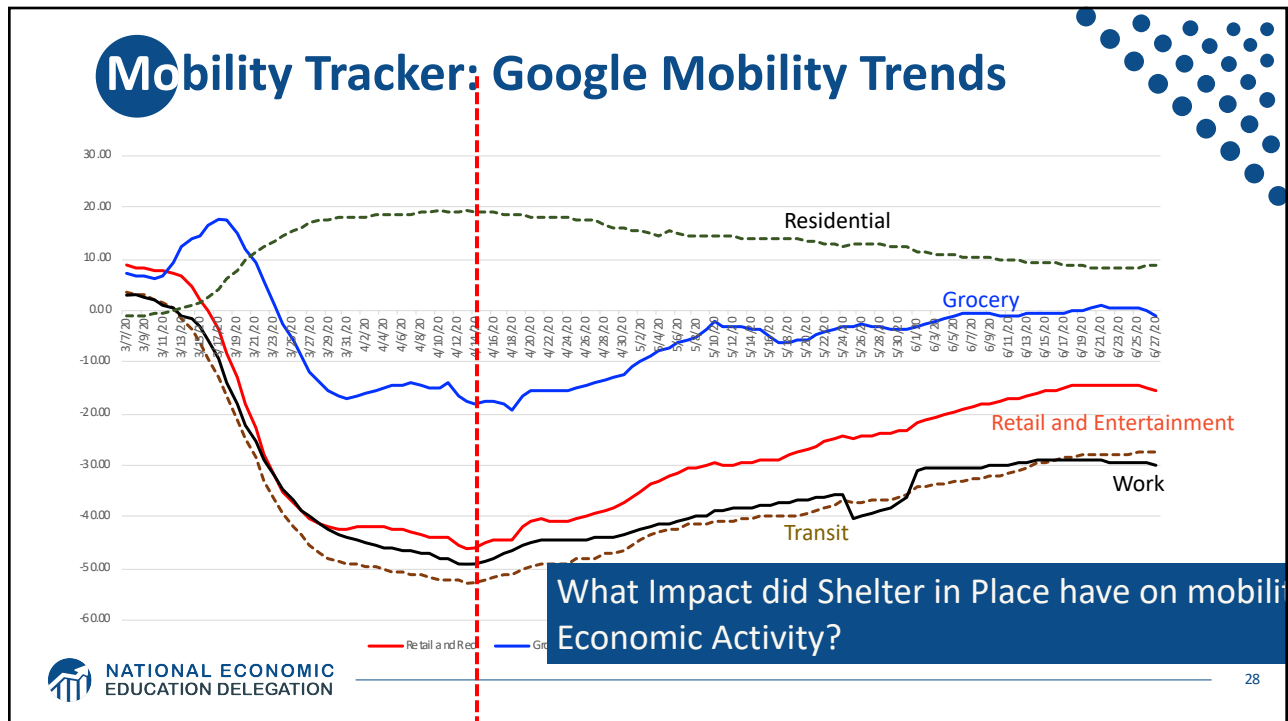
25



26



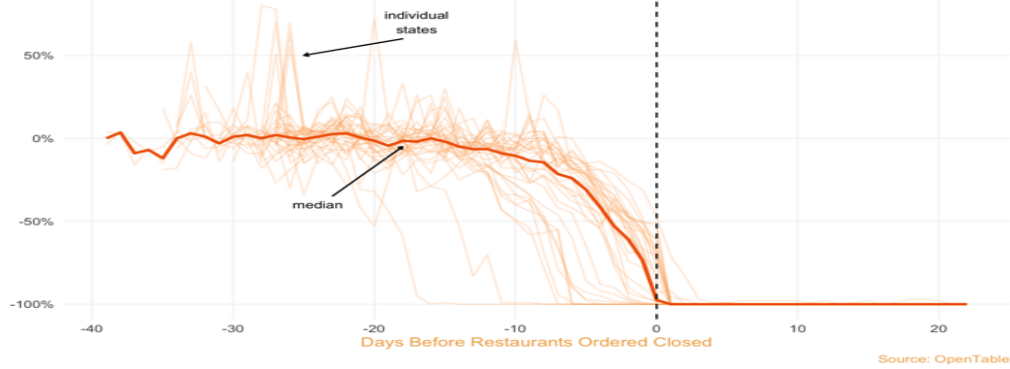
27



28

Reservations: Open Table

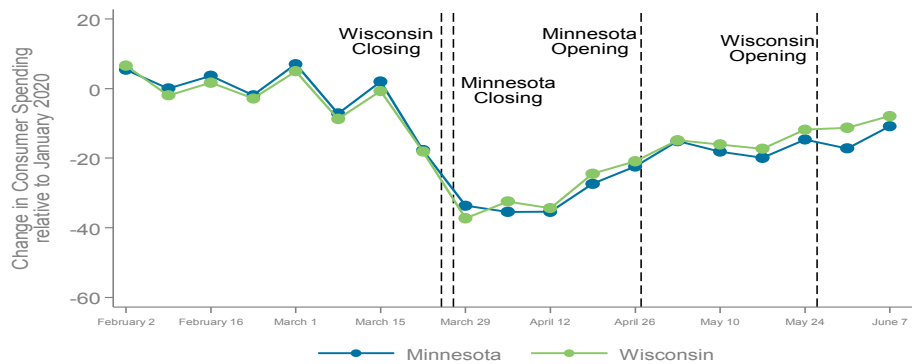
The Day Before Closures, Restaurant Reservations Had Fallen 73 Percent on Average
Percent change in 2020 OpenTable reservations in 37 states compared to same day 2019



29

Shelter in Place

Causal Effects of Re-Openings on Economic Activity: Event Studies
Case Study on Business Re-Openings: Minnesota vs Wisconsin

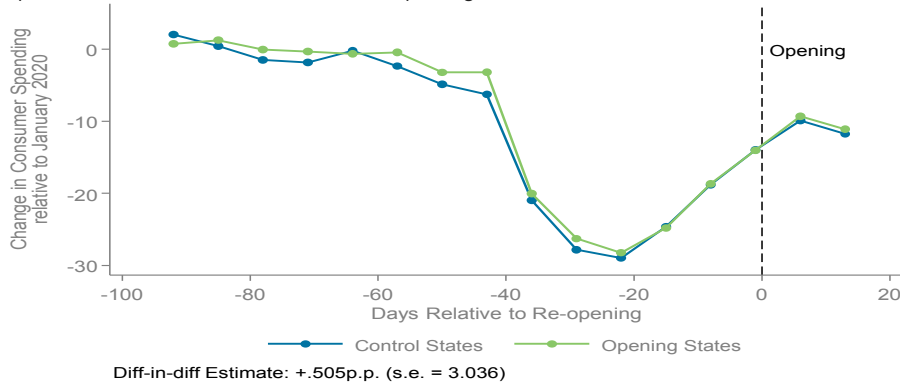


30

Shelter in Place

What about Paycheck Protection Program?

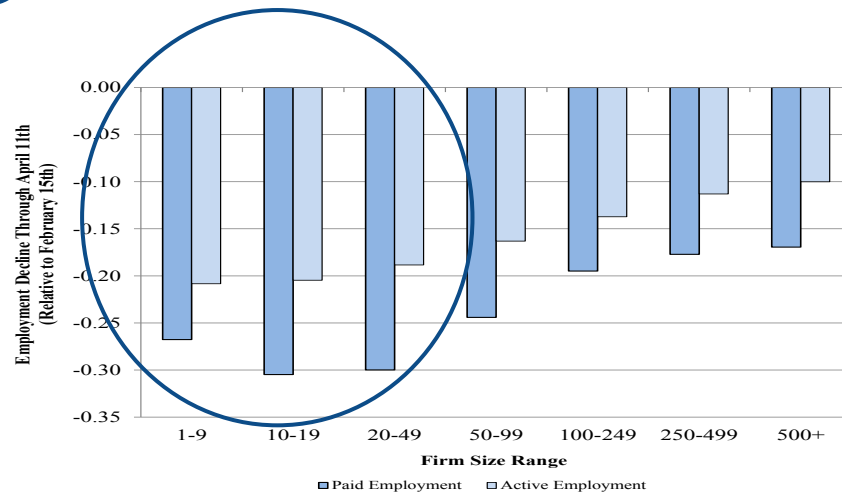
Causal Effects of Re-Openings on Economic Activity: Event Studies
 Re-Opened States vs. Control States: Consumer Spending



Goolsbee and Syverson (2020) find similar results, but....

31

Employment Changes by Firm Size



What about Paycheck Protection Program?

32

SBA Distribution

Distribution of PPP Eligible Firms			
Firm Size	Percent of Firms	Percent of Employment	PPP Loan Size (est)
Under 5	61.9%	9.8%	\$16,985
5 to 9	16.9%	11.0%	\$57,239
10 to 19	10.6%	14.0%	\$121,470
20 to 99	9.1%	35.3%	\$387,137
100 to 499	1.5%	29.9%	\$2,248,253

But Is It Enough? Loans: are for 8 weeks

33

PPP Loan Major Recipients By Industry

Industry	Amount (Billions)	Percent of Loans
Construction	\$44.9	13.1
Professional, Technical and Scientific, Services	\$43.3	12.7
Manufacturing	\$40.9	12.0
Health Care and Social Assistance	\$39.9	11.7
Accommodation and Food Service	\$30.5	8.9
Retail Trade	\$29.4	8.6
Wholesale Trade	\$19.5	5.7

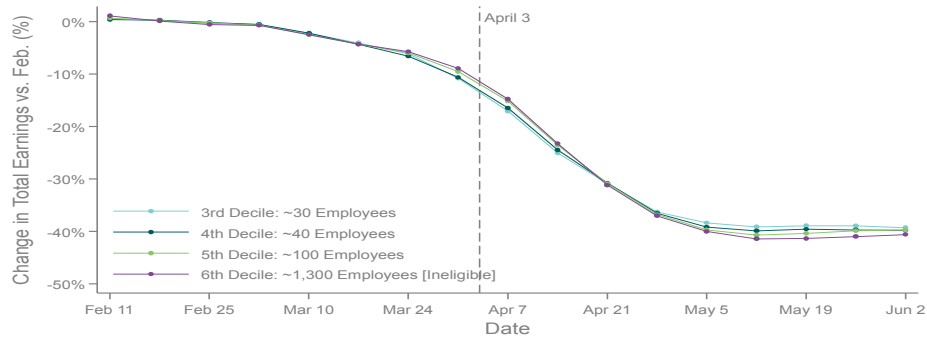
These seven (7) industries account for nearly 75% of the PPP loans

34

Paycheck Protection Program: Comparison

Impact of Paycheck Protection Program on Hours Worked

Change in Hours Worked by Decile of Firm Size, All Industries Excl. Food Services



NATIONAL ECONOMIC
EDUCATION DELEGATION

Source Chetty et al

35

35

Takeaways

- It appears that the direct payments to households did have an impact on boosting expenditures – especially for low income households.
- It appears that the sudden drop in consumer spending and mobility had less to do with “shelter in place orders” and “lockdowns”.
- In terms of mobility: while the impact of lockdowns was relatively small (7 percentage points of the 60 percentage point drop in foot traffic), it did have a large impact on certain types of establishments—bars and restaurants.
- Suggestions for the next round of fiscal policies?
- State and Local governments need to respond to their situation.
- Paycheck Protection Program impact ???



NATIONAL ECONOMIC
EDUCATION DELEGATION

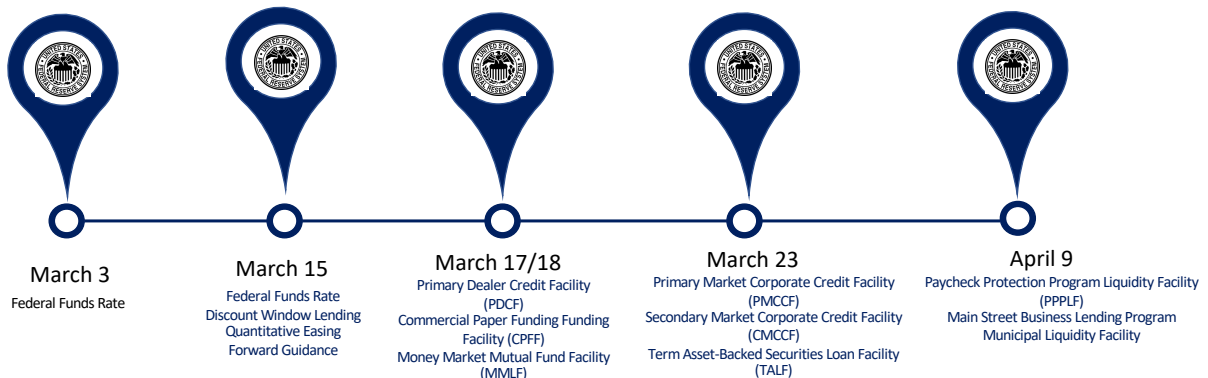
36

36

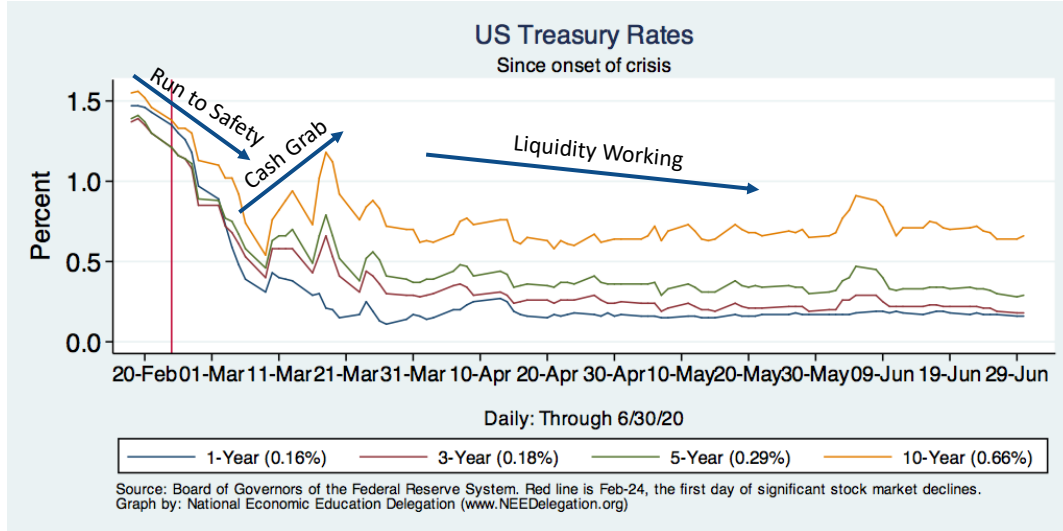
Looking Forward: Thoughts on Fiscal Policy

- Next round of fiscal policy likely to be implemented mid to late July depending on the economic conditions.
- PPP funds will run out in mid July. Will the economy have recovered enough to suggest small business will not need support?
- Will the next round of fiscal policy include additional payments for households?
- What will be done for state and local governments?
- Unemployment benefits will begin to run out by the end of July? Will there be support for the additional \$600 per week.
- Will the next round of fiscal policy involve a return to work bonus? How could it be structured?

Federal Reserve Timeline



US Treasury Rates: A Safe Haven?



NATIONAL ECONOMIC
EDUCATION DELEGATION

39

39

Federal Reserve: Support Corporations and Business

- Created the **Primary Market Corporate Credit Facility (PMCF)** allows the Fed to lend directly to corporations by buying new bond issuances and providing loans (3/17).
- Instituted the **Commercial Paper Funding Facility (CPFF)** the Fed can purchase commercial paper from firms at a given interest rate – effectively, the Fed is lending directly to firms. (3/17)
- **Main Street (Expanded) Loan Facility:** Through the CARES Act these two programs offer four-year loans to US businesses with up to 10,000 employees or revenues less than \$2.5 billion. (4/9)
- **Paycheck Protection Program Facility:** Facilitates loans under the Small Business Administration Paycheck Protection Program



NATIONAL ECONOMIC
EDUCATION DELEGATION

40

40

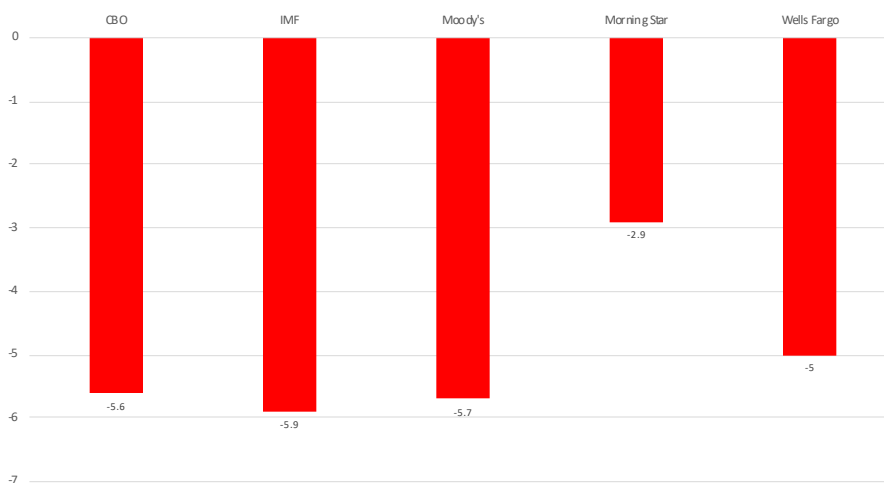
Looking Forward: Thought on the Fed's Projections

- The Fed thinks the recovery will be slow -- this is the reason Fed Chair Powell stated that the "we are not even thinking about thinking about raising interest rates." This was one of the reasons why financial markets fell so much on 6/11.
- Federal Reserve Board (median) projections indicate that they think the GDP growth will only be negative this year and the growth will be relatively high in 2021.
- The Fed's range for growth is wide – I think this represents the Fed's uncertainty about the health implications.
- While unemployment is expected to decline below 10 percent,, the Fed expects unemployment to be above the longer run rate of 4.1 percent.
- The Fed thinks the economy is still structurally sound; otherwise, they would have increased the longer run rate of unemployment above 4.1 percent.
- S. Louis Federal Reserve President James Bullard expressed concerns of a financial crisis if the coronavirus outbreak continues and leads to bankruptcies.



41

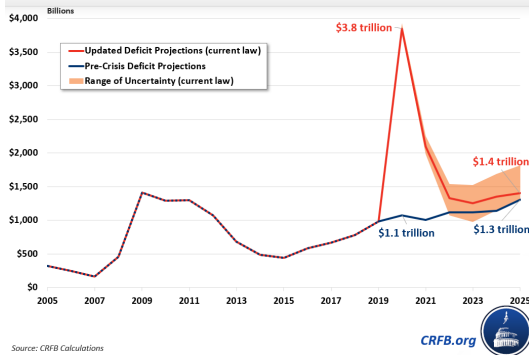
GDP Growth Projections for 2020



42

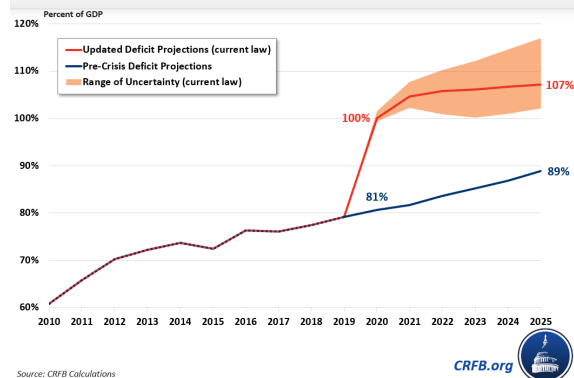
Looking Forward: Federal Budget Implications

Federal Deficit Will Reach Record Levels



Deficit may be nearly 20% of GDP

Debt Will Equal Size of Economy This Year



Debt will likely equal GDP this year

43

Conclusion

- Through March and April “...the economy is in the equivalent of a medically induced coma...” (P. Krugman, *NYTimes*, 4/16).
- Given the increase in new cases will we need to go back into a medically induced coma again this summer.
- COVID-19 is health crisis that has macroeconomic implications.
- GDP will likely contract between 5.0 and 6.0 percent this year.
- Positive economic growth may return in 2021 as long as there are preventative medicines and treatments.
- How do we plan for the next pandemic?

44

Government Response: This Shock is Different

- **This economic shock is a “health shock” with externalities that have (large) macroeconomic consequences.**
- **The fiscal and monetary response is not one where we can or should think about Keynesian versus Classical Solutions.**
- **Response should be to target the cause of the problem and provide income support for individuals and some financial support for firms.**
 - Cause of the problem is COVID-19 and its contagion.
 - Social distancing reducing income and production
 - (We hope) The economic shock is not structural and on the “other side” structurally things will be the same; therefore, we would like to preserve employment-employer matches.



Government Response: Fiscal Response

- **Respond to the impacted sector(s) – health crisis,**
- **Provide income support for the lower income and most vulnerable,**
- **Provide support to maintain employer - employee matches, and**
- **Provide support for the sectors that are most exposed to the shock.**



Federal Reserve: Standard Operations

- **Federal Funds Rate:** The Federal Reserve lowered the targeted Federal funds rate on March 3 and again on March 15 moving the targeted Federal Funds rate to zero.
- **Discount Window Lending:** Lowered the interest rate it charges banks to borrow from 1.75% to 0.25%.
- **Reserve Requirement:** Lowered the reserve requirement to zero.
- **Forward Guidance:** Honed during the Great Recession the Fed tries to set market expectations on the time path of interest rates over time.

Federal Reserve: Ensure Financial Market Stability

- **In mid-March, Treasury and Mortgage Backed Securities markets began behaving irregularly as the demand for liquidity increased.**
 - **Securities Purchases (Quantitative Easing):** Fed Response: purchase treasuries and mortgage backed securities (3/15).
 - Re-launched the **Primary Dealer Credit Facility (PDCF)** in order “smooth market functioning and facilitate the availability of credit to businesses and households (3/17).
 - Re-instituted the **Money Market Mutual Fund Liquidity Facility (MMLF)** to “assist money market mutual funds in meeting demands for redemptions by households and investors enhancing overall market function and credit provision to the *broader economy*.”
 - Increased liquidity in the **repo market**. The repo market is where firms borrow and lend cash and short-term securities. The Fed was offering \$100 billion in overnight loans and \$20 billion in two-week loans.
 - o The Fed increased the offerings to \$1 trillion (from \$100 bn) in overnight repos, and
 - o \$500 billion in one month **and** three-month repos (from \$20bn 2/wks).

Federal Reserve: Support Corporations and Business

- Created the **Primary Market Corporate Credit Facility (PMCCF)** allows the Fed to lend directly to corporations by buying new bond issuances and providing loans (3/17).
- Instituted the **Commercial Paper Funding Facility (CPFF)** the Fed can purchase commercial paper from firms at a given interest rate – effectively, the Fed is lending directly to firms. (3/17)
- **Main Street (Expanded) Loan Facility:** Through the CARES Act these two programs offer four-year loans to US businesses with up to 10,000 employees or revenues less than \$2.5 billion. (4/9)
- **Paycheck Protection Program Facility:** Facilitates loans under the Small Business Administration Paycheck Protection Program

Federal Reserve: Other Support

• Support for Households and Consumers:

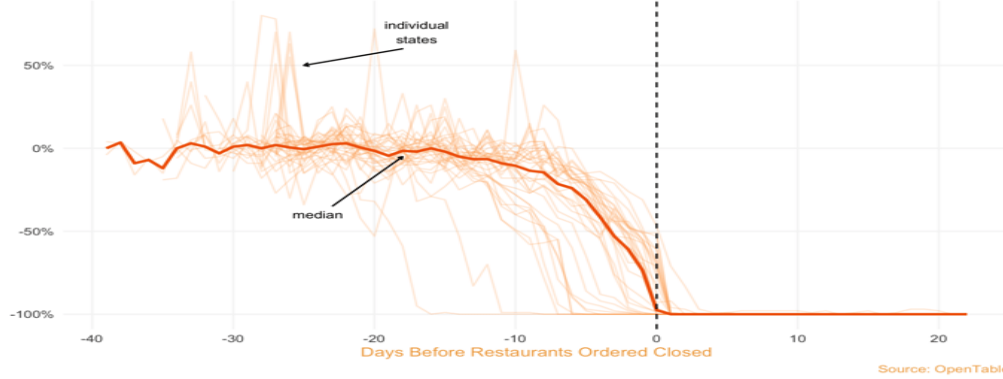
- Re-instituted Term Asset-Backed Securities Loan Facility (TALF) by which the Fed lends to holders of asset backed securities that are collateralized by new loans. Extended this program to include existing commercial mortgage-backed securities and newly issued collateralized debt obligations.

• Support for States and Municipalities

- The municipal bond market exhibited signs of stress in March it was becoming increasingly hard to borrow in the Muni-market. The Fed created the Municipal Lending Facility to lend directly to state and local governments.
- Also expanded eligible collateral to include municipal debt in the MMLF and CPFF market.

Reservations: Open Table

The Day Before Closures, Restaurant Reservations Had Fallen 73 Percent on Average
Percent change in 2020 OpenTable reservations in 37 states compared to same day 2019



Thank you!

Any Questions?

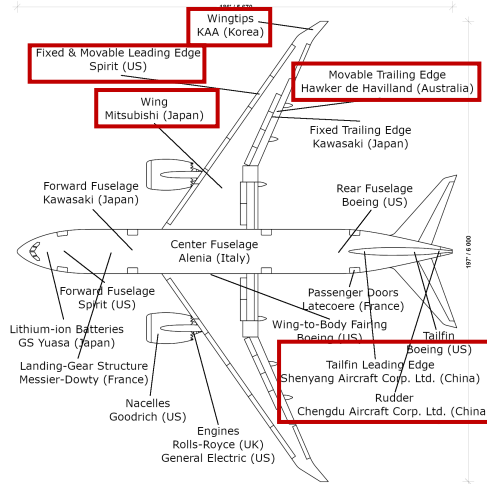
www.NEEDelegation.org

<presenter name>

<presenter email>

Contact NEED: NEEDelegation@gmail.com

Coronavirus: Supply Chains



If contained, COVID-19 would mainly disrupt manufacturing supply chains.

The more a country's manufacturing relied on these supply chains the bigger the impact on GDP.